



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, DC 20233-0001

MASTER FILE

October 31, 2000

DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM SERIES #L-4 (Revised)

MEMORANDUM FOR Michael Longini
Chief, Decennial Systems and Contracts Management Office

From: Howard Hogan *Howard Hogan*
Chief, Decennial Statistical Studies Division

Subject: Specification for Census 2000 Initial Response Rate for the
'90 Plus Five Project

Contact Persons: James B. Treat, DSSD, Room 2-2120B, (301) 457-4296
C. Robert Dimitri, DSSD, Room 2-2228, (301) 457-8026 *gBT*
CRD

This memorandum defines the method of calculating the Census 2000 Initial Response Rates used for the '90 Plus Five component of the How America Knows What America Needs (HAKWAN) program. These rates were posted in on the '90 Plus Five internet site that displayed the Census 2000 Initial Response Rates in March and April of 2000. Specifically, the Census 2000 Initial Response Rates were updated daily from March 27, 2000 through April 11, 2000. Two additional posts were released on April 18, 2000, and April 25, 2000. Each post corresponded to the data received through close of business two days previous. Note that this specification for the Census 2000 Initial Response Rate was finalized well after the actual calculation of the rates rather than serving as a request for their calculation. Informal exchanges provided the methodology for calculating the rates at the time that they were generated.

Over the course of the internet postings, there were updates to the Decennial Master Address File (DMAF) that took place that potentially could alter Census 2000 Initial Response Rate denominators from one day to the next. We did not wish areas monitoring their Census 2000 Initial Response Rates to be surprised with drops in their rates due to those updates. Therefore, built into the software was a stipulation that if a rate for any given entity was less than the rate of the previous posting, the previous rate would be used again.

This same Census 2000 Initial Response Rate was also used for the Management Information System Cost and Progress (MIS C & P) reports and for the Technology Management Office/Field Division Operations Control System/2000 (TMO/FLD OCS2000) reports. Some disparities which were never explained were found between the Census 2000 Initial Response Rates and these other products. Additionally, those rates were allowed to drop at the time of the cut for nonresponse followup (NRFU) in order to give internal census personnel an accurate picture of the NRFU workload.

For a less technical definition of the Census 2000 Initial Response Rate and a general discussion of the procedures involved in the postings, see the Census 2000 Decision Memorandum Series. At the time this memorandum was produced, that memorandum documenting the rate definitions was still in draft form.

Census 2000 Initial Response Rates were calculated by dividing the numerator by the denominator, multiplying by 100, and rounding the result to the nearest whole integer.

To be part of a Census 2000 Initial Response Rate denominator, a housing unit had to satisfy the following criteria. Attachment 1 contains a list of the DMAF variables referenced below and their values. The housing unit must have been a part of the universes described in steps A and B below, but it could not be a member of that universe's subset described in step C.

- A. The housing unit appeared in one of the entities of interest. Geography Division (GEO) and Decennial Statistical Studies Division (DSSD) created a file which describes all of the counties and functioning governmental units as of January 1, 1999.

Some entities that GEO provided were found to have seven housing units or fewer as of the January 2000 update to the DMAF. These entities were not included in the universe.

Six entities that should have been included in the universe were not included. These were Macedonia, Alabama; Chain of Rocks, Missouri; Hudson, Ohio; Millsap, Texas; and Whitehall, West Virginia.

- B. The housing unit fell under one of the applicable blocks found on the DMAF. GEO produced a universe file of blocks which contained mailback areas (TEAs 1, 2, 6, 7, and 9) for the governmental entities defined in step A above. Block variables found in the Collection GRFC Index File section of the DMAF were used by Decennial Systems and Contracts Management Office (DSCMO) to identify the appropriate corresponding housing units for each entity that needed a calculated Census 2000 Initial Response Rate.

A given housing unit qualified for the denominator if corresponding block variables in the Collection GRFC Index File portion of the DMAF satisfied...

...the applicable blocks (provided for DSCMO by GEO) defined for the project via variables **BKN** and **BKP** and linked back to the step A geocode universe via variables **CST**, **CCOU**, **MCD**, **PLACE**, **AIR**, and **CCITY**

AND

(TEA = 1 or 2 or 6 or 7 or 9).

- C. Within the defined universe from steps A and B (governmental entities and their mailback blocks), the following criteria categorize addresses which were excluded from the Census 2000 Initial Response Rate denominator. There is a Census 2000 Initial Response Rate denominator for each of the entities described in step A, and the housing units within each of those denominators must have met the criteria of steps A and B without satisfying the two conditions of step C. The first of these conditions loosely corresponds to the condition which determines the ineligibility of housing units for nonresponse followup (NRFU), as defined in DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM #BB-4R (Revised), "Specification for Identifying the Nonresponse Followup Universe for Census 2000," with a slight change in the universe.

1. Housing Units Ineligible for NRFU (Except Those in Certain Experimental Panels)

Exclude those addresses which were not eligible for NRFU, unless they were a part of panels 7, 8, or 9 of the Response Mode and Incentive Experiment. Addresses in these experimental panels were mailed questionnaires but were designated to receive an alternative treatment in the case of nonresponse.

In terms of the DMAF variables, a given housing unit should have been excluded from the Census 2000 Initial Response Rate denominator if the corresponding housing unit variable from the Master Address File (MAF) Status Record portion of the DMAF satisfied...

$MNRE = N$

...unless the corresponding housing unit variable from the DMAF Operational Files portion of the DMAF satisfied...

$REXPAN = 26 \text{ or } 27 \text{ or } 28$.

One type of housing unit that fell under the $MNRE = N$ category was those housing units that had a surviving MAF ID. The presence of this ID indicated that the housing unit was a duplicate of another housing unit already on the file. In the cases for which these were removed from the Census 2000 Initial Response Rate denominator, their data could still affect the numerator (see criteria below).

2. Incomplete Addresses

Exclude those housing units in mailout areas for which the address information was incomplete. These were not delivered a mailback questionnaire by either the U.S. Postal Service or Census Bureau enumerator staff.

In terms of the DMAF variables, a given housing unit should have been excluded from the Census 2000 Initial Response Rate denominator if corresponding housing unit variables from the DMAF Operational Files portion of the DMAF satisfied...

(TEA = 1 or 6)

AND

UAA = 8.

A given housing unit qualified for the Census 2000 Initial Response Rate numerator if it satisfied the above criteria for the denominator (steps A, B, and C) and if corresponding DMAF Operational File records satisfied...

(MAILS = 1 or 2 or 3 or 4)

AND

MAILD * 0000 or 0099.

Additionally, as mentioned above in step C, in the cases for which surviving MAF ID housing units were removed from the denominator, their data could affect the numerator. If the duplicate MAF ID met the numerator criteria, then the original MAF ID to which it matched should have counted toward the numerator.

Census 2000 Initial Response Rate files were provided by DSCMO for Systems Support Division (SSD), which prepared them for internet presentation by linking them to the entity file mentioned in step A.

For each internet posting that occurred, the Census 2000 Initial Response Rate file from the prior day contained the corresponding rates. This was due to time allowed for processing and review of rates. Additionally, each Census 2000 Initial Response Rate file was reflective of data received through close of business on the previous day. Consequently, a given internet posting represented the state of affairs at close of business two days previous.

Again, a Census 2000 Initial Response Rate was calculated for each of the entities described in step A by dividing the number of housing units in the numerator by the number of housing units in the denominator, multiplying by 100, and rounding to the nearest whole integer. Rounding to the nearest integer rates that had already been rounded to the nearest tenth actually produced some rounding error that would have been generous to theoretically about five percent of the entity universe. If a Census 2000 Initial Response Rate had raw tenths and hundredths digits of

.45, .46, .47, .48, or .49, then the rate would have been rounded up at the integer level. As mentioned previously, the Census 2000 Initial Response Rate never decreased from one posting to the next.

cc: DSSD Census 2000 Procedures and Operations Memorandum Series Distribution List

| | | | |
|--------------|-----|---------------|-------|
| E. Gore | DMD | D. Stoudt | DSCMO |
| B. Tinari | " | G. McLaughlin | " |
| M. Sanders | " | C. Kahn | " |
| J. Marinucci | GEO | J. Treat | DSSD |
| L. Ramirez | " | R. Dimitri | " |
| R. Taylor | SSD | H. Stackhouse | " |
| T. Berti | " | D. Sheppard | " |

DMAF Variables and ValuesFrom the Collection GRFC Index File

| | | |
|-------|----------------------------------|---|
| BKN | Collection Block Number | |
| BKP | Block Part | |
| TEA | Type of Enumeration Area | |
| | 1 = Mailout Mailback | 5 = Update Enumerate |
| | 2 = Update Leave | 6 = Military in Update Leave Area |
| | 3 = List Enumerate | 7 = Urban Update Leave |
| | 4 = Remote List Enumerate | 9 = Update Leave (converted from TEA 1) |
| CST | Current FIPS State Code | |
| CCOU | Current FIPS County Code | |
| MCD | Minor Civil Division Code | |
| PLACE | Census Incorporated Place Code | |
| AIR | American Indian Reservation Code | |
| CCITY | Consolidated City Code | |

From the MAF Status Record

| | |
|------|----------------------------------|
| MNRE | NRFU Eligibility Flag |
| | Y = address is NRFU eligible |
| | N = address is not NRFU eligible |

From the DMAF Operational Files

| | |
|-------|--|
| MAILD | Mail Return Check-in Month and Day |
| | 0000 = No Mail Return Check-in |
| | 0099 = Reverse Check-in |
| | 0101 - 1231 = Check-in Day of 1 st return |
| MAILS | Mail Check-in Source |
| | 0 = No return |
| | 1 = Mailback |
| | 2 = CATI |
| | 3 = Internet |
| | 4 = Be Counted |

UAA**Undeliverable as Addressed**

0 = No UAA Checkin

1 = UAA checkin in NPC only

2 = UAA checkin in NPC; in LCO checkin; no LCO checkout

3 = UAA checkin in NPC; no LCO checkin; in LCO checkout

4 = UAA checkin in NPC; in LCO checkin; in LCO checkout

5 = No UAA checkin in NPC; in LCO checkin; no LCO checkout

6 = No UAA checkin in NPC; no LCO checkin; in LCO checkout

7 = No UAA checkin in NPC; in LCO checkin; in LCO checkout

8 = Not enough address information -- Excluded from Mail

REXPAN**R&E Panel Numbers (only the applicable values for this specification)**

26 = S-900.1 NRFU, incentive, CATI RMIE

27 = S-900.1 NRFU, incentive, ASQ RMIE

28 = S-900.1 NRFU, incentive, internet RMIE